

The Seminar of Nuclear Safety in Advanced Reactors and the Seminar of Nuclear Fusion: two formative initiatives from Universidad Politécnica de Madrid and Spanish Young Generation in Nuclear (Jóvenes Nucleares)

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I. INTRODUCTION

Spanish Young Generation in Nuclear (Jóvenes Nucleares) is a commission of the Spanish Nuclear Society (SNE), whose main goals are to spread knowledge about nuclear energy among the society.

Following this motivation, two Seminars have been carried out with the collaboration of the Technical University of Madrid: The Seminar of Nuclear Safety in Advanced Reactors (SRA) and the Seminar of Nuclear Fusion (SFN).

The first one, which has been celebrated every year since 2010, aims to show clearly the advances that have been obtained in the section of safety with the new reactors, from a technical but simple point of view and without needing great previous nuclear engineering knowledge.

The second one, which first edition was held in 2011, aims to give a general overview of the past, present and future situation of nuclear fusion technology, and was born as a result of the increasing interest of our Spanish Young Generation members in this technology.

II. SEMINAR OF NUCLEAR SAFETY IN ADVANCED REACTORS

A. Seminar Development

The first edition of the seminar, celebrated in April 2010 lasted four days and was divided into two lectures of one hour each day, except the last day that consisted of a two hours lecture. The second one, celebrated in March-April 2011 was extended to 6 days.

The lectures described and compared safety features of KWU PWR and AP100, BWR, ABWR and ESBWR of GE, EPR of AREVA and ADS, and finally Generation IV.

The opening session of both editions was chaired by the Vice-rector of the Technical University of Madrid and full-professor of Nuclear Technology Dr. Emilio Mínguez and by the Spanish Young Generation in Nuclear president in that moment, Miguel Millán in 2010 and Luis Yague in 2011.



Figure 1. SRA first edition's opening session

For both editions, the Seminar was highly crowded every day, with more than 70 daily attendees.

The closing session of both editions was conducted by the president of the Spanish Nuclear Society, Mr. José Emeterio Gutiérrez in 2010 and Ms. Lola Morales in 2011.

B. Survey results

In both editions, after every session, a survey was sent to the attendees, and about 50% of them filled it. They were asked to score the lectures, the material, the level of knowledge of the lecturers, and whether the lecture was didactic or not. Furthermore, they had the opportunity to write down freely their suggestions and comments about the seminar.

As a first conclusion of the surveys, the scores were highly satisfactorily. Moreover, they valued the seminars as very didactic, which represent a success itself giving the very varied level of knowledge of the audience.

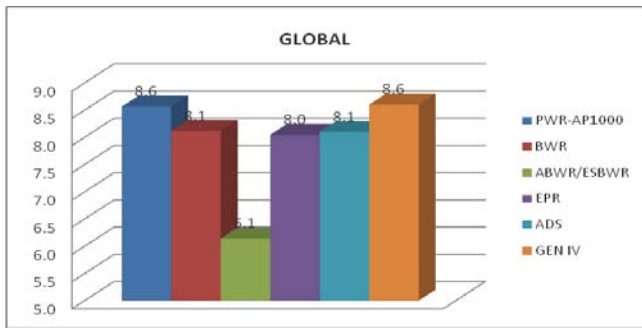


Figure 2. SRA first edition's global score

III. SEMINAR OF NUCLEAR FUSION

A. Seminar development

In November 2011 the first edition of the Seminar of Nuclear Fusion was carried out in the Technical University of Madrid. It lasted 4 days with one lecture of 2 hours of duration each day.

The first lecture described the historical antecedents of fusion as well as the basics of this technology, while the second and third described in detail the main two technological approaches for fusion: inertial confined fusion and magnetic confined fusion, respectively. The last lecture dealt with all the projects in course, remarking the challenges of each of them.

The opening session was chaired by the Director of the Nuclear Fusion Institute of Madrid (DENIM), Dr. Manuel Perlado.

For being a first edition, it was really a surprise the great reception the seminar had. More than 70 attendees every day, and for the opening session there were even people waiting to be granted the access to the conference room.



Figure 3. SFN attendance

The closing session was presented by Dr. Emilio Mínguez, representing the Spanish Nuclear Society's board of directors and by the current Spanish Young Generation in Nuclear president, Luis Yagüe.

B. Survey results

As well as in the Seminar of Nuclear Safety in Advanced Reactors, after every session a survey was sent to the attendees. They were asked to score the lectures, material and the level of the lecturer and to decide whether the lecture was didactic or not. They had also the chance to make comments and suggestions to help us to improve future courses.

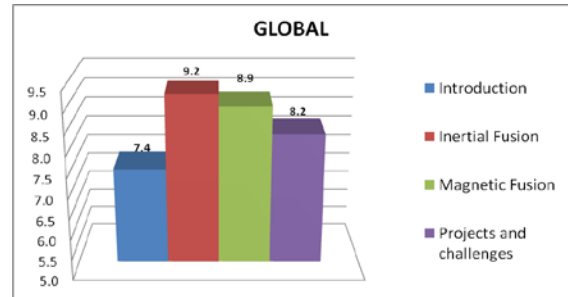


Figure 4. SFN global Score

The participation on the survey was representative, since more than 50% of the attendees filled it. The results were satisfactorily too, as it can be drawn from figure 4. Moreover, they agreed that the whole seminar resulted very didactic and interesting.

ACKNOWLEDGMENT

Jóvenes Nucleares would like to thank the Spanish Nuclear Society for their support and comprehension. Without their help none of those activities could have been carried out.

Moreover, we would like to thank the Universidad Politécnica de Madrid for its support in the organization of the seminars.

REFERENCES

- [1] www.jovenesnucleares.org